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EXAMINER	
LAY, MICHELLE K	
ART UNIT	PAPER NUMBER
2628	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/785,263	YAMAGUCHI ET AL.	
	Examiner	**Art Unit**	
	Michelle K. Lay	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6,8,9,12,14 and 16-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6,8,9,12,14 and 16-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed 12/14/2006 has been entered and made of record. Claims 1, 4, 6, 8, 9, 12, 14, and 16-19, are pending.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

In regards to claims 8, 16 and 19, Applicant argues Chen et al. (5,588,098) fails Applicant argues that Chen fails to teach a determination means for *halting the scaling when the coordinate detecting means no longer detects the user's physical touch.* Examiner respectfully disagrees. As Applicant makes point of in *Remarks* filed 12/14/2006, when the pointer of Chen is moved to a different area of the screen, the manipulation of an object stops [col. 12 lines 15-21]. Thus, as the user removes the pointer off of the scaling active zones, the manipulation of the object (i.e. scaling up or down) ends.

Applicant's arguments with respect to claims 1, 4, 6, 9, 12, 14, 17, and 18 have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims **8**, **16**, and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (5,588,098).

Chen teaches the limitations of claims 8, 16, and 19 with the exception of explicitly disclosing halting scaling when the coordinate detecting means no longer detects a coordinate defined on the display screen by a user's physical touch on the display screen. However, Chen teaches, as well as Applicants, when the pointer of Chen is moved to a different area of the screen, the manipulation of an object stops [col. 12 lines 15-21]. Thus, as the user removes the pointer off of the scaling active zones, the manipulation of the object (i.e. scaling up or down) ends.

In regards to claim **8**, Chen teaches ***a three-dimensional object manipulating apparatus, comprising:***

- ***a display means for displaying a three-dimensional object on the screen of a display unit;***

  [Fig. 1 (19)]

- ***a coordinate detecting means for detecting a coordinate defined on the display screen by a user's physical touch on the display screen;***

[Fig. 1 (15); col. 4, lines 30-40] The system/method of Chen uses the input controller (15) (mouse, 2-D trackball, joystick, stylus, ***touch screen***, touch tablet, etc.) for the manipulations of the images on the screen. Although Chen uses a mouse as an example, it should be understood that a substitute input device, such as a touch screen, can be used. Thus, the user's finger acts as the mouse for manipulation of the displayed objects. Furthermore, the input device controls the position of a pointer. Thus, the two-dimensional movement of the mouse on the surface translates into a corresponding two-dimensional movement of the mouse pointer on the video display [col. 4, lines 53-61]. Furthermore, it is implicit that the input controller (15) in conjunction with the CPU/memory unit (11) provides a coordinate detection means, in order for the two-dimensional movement of the mouse to translate onto into a corresponding two-dimensional movement of the mouse pointer on the video display, otherwise the system/method of Chen would not be able to identify to the location of the input device.

- ***a determination means for determining whether the three-dimensional object is to be scaled up or down in predetermined cycle on the basis of the coordinate detected by the coordinate detecting means; and***
  [Fig. 11, enlarging arrow indicating that dimensions are to be affected in the case of a scaling active zone; col. 6, lines 30-39; col. 7, lines 7-21].
- ***an object scale-up/-down means for scaling up or down the three-dimensional object on the basis of the result of determination supplied***

from the determination means, wherein the three-dimensional object stops scaling up or down when the coordinate detecting means no longer detects a coordinate defined on the display screen by a user's physical touch on the display screen.

[Fig. 8, col. 17, line 31 – col. 18, line 26]. Additionally, as Applicant makes point of in *Remarks* filed 12/14/2006, when the pointer of Chen is moved to a different area of the screen, the manipulation of an object stops [col. 12 lines 15-21]. Thus, as the user removes the pointer off of the scaling active zones, the manipulation of the object (i.e. scaling up or down) ends.

In regards to claim **16**, claim 16 recites similar limitations as claim 8 and thus, is rejected with the same basis and rationale as claim 8.

In regards to claim **19**, claim 19 recites similar limitations as claim 8 and thus, is rejected with the same basis and rationale as claim 8. Furthermore, Chen teaches a computer system (10) as shown in Fig. 1. The system includes a CPU/memory unit (11) that comprises a microprocessor, related logic circuitry, and memory circuits. A keyboard (13) provides inputs to the CPU/memory unit (11), as well as the 2-D input controller (15). Disk drives (17) are used for mass storage of programs and data. Display output is provided by a video display (19).

2. Claims **1**, **4**, **6**, **9**, **12**, **14**, **17**, and **18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. (5,588,097) in view of Lines et al. (5,557,714).

Ono teaches the limitations of claims **1**, **4**, **6**, **9**, **12**, **14**, **17**, and **18** with the exception of disclosing stopping rotation when the coordinate detecting means no longer detects a coordinate defined on the display screen by a user's physical touch on the display screen. However, Lines teaches a method/system to rotate a three-dimensional model on a computer display in response to user input, where the point-positioning device can be a touch screen.

In regards to claim **1**, Ono teaches ***a three-dimensional object manipulating apparatus, comprising:***

- ***a display means for displaying a three-dimensional object on the screen of a display unit*;**

  [Fig. 1 (6, 9); col. 2, line 33 – col. 3, line 27]

- ***a coordinate detecting means for detecting a coordinate defined on the display screen by a user's physical touch on the display screen;***

  Ono teaches [Fig. 1 (5, 6, 7); positional information indicated by user via a pen (7) on a display screen (6) of the tablet (5), is input to the image generating section (2); col. 2, line 33 – col. 3, lines 27; col. 3, lines 45-64].

  Referring to Fig. 1 of Lines, the pointer-positioning device (104) can be a touch screen [col. 3 lines 54-60]. The rotation routine enables the computer system (100) to rotate a three-dimensional model in response to a user

"grabbing" a reference point on the chart with the input device (104), and then "dragging" that reference point to a new location [col. 4 lines 7-11].

Therefore, it would have been obvious to one of ordinary skill in the art to implement the touch screen of Lines and use the user's own finger as the input device instead of the tablet (5) and pen (7) of Ono in order the free the user from having additional input devices, such as a mouse or stylus.

- ***a determination means for determining an axis and direction of rotation for the three-dimensional object in a predetermined cycle on the basis of the coordinate detected by the coordinate detecting means***;

  [Fig. 1b (18); axial rotation angle calculation circuit (18) performs calculations to determine the three degrees of freedom to be used for controlling the posture of object in three-dimensional space; col. 3, lines 1-5].

- ***an object rotating means for rotating the three-dimensional object on the basis of the result of determination supplied from the determination means;***

  [Fig. 1 (3); col. 2, line 33 – col. 3, line 27].

- ***wherein the determination means determines the axis and direction of rotation for the three-dimensional object on the basis of a positional relation between the coordinate detected by the coordinate detecting means and a central coordinate on the display screen; and***

  The data is inputted by the user for the rotational operation via input device shown in Fig. 1 (5, 6, 7). As shown in Figs 4a-4d, the polar coordinates are

specified by moving a point P (***coordinate detected by the coordinate detecting means***) on the spherical surface (22) from P0 to P1 to rotate the object (21). The rotation about an axis is defined by the center O (***central coordinate***) of spherical surface (22) and the point P0 or P1 [col. 3, lines 45-65].

As shown in Fig. 4c, a rotation angle α about the axis (O-P1) is determined via points P2 and P3. Additionally, the user moves the pen (7) from the start point P2 in the direction of the desired rotation and then specifies another point P3 on the spherical surface (22), so that the angle $P_2P_1P_3$ defines a rotation angle about the axis OP1 [col. 3, lines 45-65; col. 5, lines 30-47].

Ono implicitly teaches ***wherein the determination means further determines a rotating speed for the three-dimensional object on the basis of a distance between the coordinate detected by the coordinate detecting means and a central coordinate on the display screen, and the object rotating means rotates the three-dimensional object at the determined speed; and***

The user defines an axis of rotation as well as an angle of rotation. Applicant defines the angle of rotation as the speed of rotation [refer to [0091]]. As shown in Fig. 4c of Ono et al., a rotation angle α about the axis (O-P1) is determined via points P2 and P3. Additionally, the user moves the pen (7) from the start point P2 in the direction of the desired rotation and then specifies another point P3 on the spherical surface (22), so that the angle $P_2P_1P_3$ defines a rotation angle about the axis OP1 [col. 3, lines 45-65; col. 5, lines 30-47]. Therefore, from the definition within the disclosure of the current

application, Ono teaches the speed of rotation. As stated in the office action and mentioned in Applicant's remarks, Applicant defines the angle of rotation as the speed of rotation [refer to [0091]]. It is well known in basic trigonometry, that in order to constitute an angle, three points are needed, even if two of the points are along the same axis. Therefore, depending on the user's choice, P2 and P3 can be set to the same axis (therefore, being one point, e.g. coordinate) so that the graphic object rotates around the axis of rotation at a constant speed of rotation [col. 3, lines 45-65; col. 5, lines 30-47].

Lines teaches ***a three-dimensional object manipulating apparatus comprising:***

- ***wherein the three-dimensional object stops rotating when the coordinate detecting means no longer detects a coordinate defined on the display screen by a user's physical touch on the display screen.***

  Lines teaches a system/method for rotating the display of a three-dimensional model in response to user manipulation of a pointer-positioning device [col. 3 lines 19-22]. Referring to Fig. 1, the pointer-positioning device (104) can be a touch screen [col. 3 lines 54-60]. The rotation routine enables the computer system (100) to rotate a three-dimensional model in response to a user "grabbing" a reference point on the chart with the input device (104), and then "dragging" that reference point to a new location [col. 4 lines 7-11]. In the example provided by Lines, to rotate the chart (200) displayed on the display device (103), the user first positions the pointer (210) over the reference point (201) and then depresses a predefined mouse button. While

depressing the predefined mouse button, the user repositions the pointer (210), effectively dragging the reference point (201). The computer system (100) rotates the chart (200) to match the movement of the pointer (210). When the user releases the predefined mouse button, a signal is sent to the rotation routine that the user desires to cease rotation of the chart (200) [col. 4 lines 7-60]. Although Lines uses the example of a mouse pointer with buttons, Lines does teach the use of a touch screen. It would have been obvious to one of ordinary skill in the art to use the user's finger (said ***physical touch***) as the input device to manipulate the pointer (210) to rotate the chart (200). Therefore, as the user touches the touch screen, it acts as depressing the mouse button. As the user drags his/her finger (i.e. pointer (210)) while keeping interaction with point (201), computer system (100) rotates chart (200) to match the movement of pointer (210), i.e. user's finger. Furthermore, as with the mouse, when the user takes his/her finger off of the touch screen (i.e. releases mouse button), a signal is sent to the rotation routine that the user desires to cease rotation of the chart.

It would have been obvious to one of ordinary skill in the art to implement the halting of rotation when the user's physical touch has been removed as taught by Lines in the method/system of Ono since the kinesthetic correspondence between the movement of the pointer positioning device (i.e. user's touch) and the direction of the model's movement provides the sense of actually rotating the displayed model [Lines: col. 1 lines 31-36].

In regards to claim **4**, Ono et al. teaches ***a three-dimensional object manipulating apparatus, comprising:***

- ***a display means for displaying a three-dimensional object on the screen of a display unit***;

  [Fig. 1 (6, 9); col. 2, line 33 – col. 3, line 27]

- ***a coordinate detecting means for detecting a coordinate defined on the display screen by a user's physical touch;***

  Ono teaches [Fig. 1 (5, 6, 7); positional information indicated by user via a pen (7) on a display screen (6) of the tablet (5), is input to the image generating section (2); col. 2, line 33 – col. 3, lines 27; col. 3, lines 45-64].

  Referring to Fig. 1 of Lines, the pointer-positioning device (104) can be a touch screen [col. 3 lines 54-60]. The rotation routine enables the computer system (100) to rotate a three-dimensional model in response to a user "grabbing" a reference point on the chart with the input device (104), and then "dragging" that reference point to a new location [col. 4 lines 7-11].

  Therefore, it would have been obvious to one of ordinary skill in the art to implement the touch screen of Lines and use the user's own finger as the input device instead of the tablet (5) and pen (7) of Ono in order the free the user from having additional input devices, such as a mouse or stylus.

- ***a determination means for determining an axis and direction of rotation for the three-dimensional object in a predetermined cycle on the basis of the coordinate detected by the coordinate detecting means***; ***and***

[Fig. 1b (18); axial rotation angle calculation circuit (18) performs calculations to determine the three degrees of freedom to be used for controlling the posture of object in three-dimensional space; col. 3, lines 1-5].

- ***an object rotating means for rotating the three-dimensional object on the basis of the result of determination supplied from the determination means;***

[Fig. 1 (3); col. 2, line 33 – col. 3, line 27].

- ***wherein the determination means determines an axis and direction of rotation for the three-dimensional object on the basis of a positional relation between the coordinate detected by the coordinate detecting means and the three-dimensional object on the display screen;***

The data is inputted by the user for the rotational operation via input device shown in Fig. 1 (5, 6, 7). As shown in Figs 4a-4d, the polar coordinates are specified by moving a point P (***coordinate detected by the coordinate detecting means***) on the spherical surface (22) from P0 to P1 to rotate the object (21). The rotation about an axis is defined by the center O of spherical surface (22) and the point P0 or P1 [col. 3, lines 45-65].

As shown in Fig. 4c, a rotation angle α about the axis (O-P1) is determined via points P2 and P3. Additionally, the user moves the pen (7) from the start point P2 in the direction of the desired rotation and then specifies another point P3 on the spherical surface (22), so that the angle $P_2P_1P_3$ defines a rotation angle about the axis OP1 [col. 3, lines 45-65; col. 5, lines 30-47].

Since points P0 and P1 can be specified by the simple operation of freely moving the pen (7) on the surface (22), the user can rotate the object (21) to an arbitrary orientation as desired [col. 5, lines 19-20]. Thus, the user can select coordinates in reference to the three-dimensional object.

Ono implicitly teaches ***wherein the determination means further determines a rotating speed for the three-dimensional object on the basis of a distance between the coordinate detected by the coordinate detecting means and a central coordinate on the display screen, and the object rotating means rotates the three-dimensional object at the determined speed; and***

The user defines an axis of rotation as well as an angle of rotation. Applicant defines the angle of rotation as the speed of rotation [refer to [0091]]. As shown in Fig. 4c of Ono et al., a rotation angle α about the axis (O-P1) is determined via points P2 and P3. Additionally, the user moves the pen (7) from the start point P2 in the direction of the desired rotation and then specifies another point P3 on the spherical surface (22), so that the angle $P_2P_1P_3$ defines a rotation angle about the axis OP1 [col. 3, lines 45-65; col. 5, lines 30-47]. Therefore, from the definition within the disclosure of the current application, Ono teaches the speed of rotation.

Lines teaches ***a three-dimensional object manipulating apparatus comprising:***

- ***wherein the three-dimensional object stops rotating when the coordinate detecting means no longer detects a coordinate defined on the display screen by a user's physical touch on the display screen.***

Lines teaches a system/method for rotating the display of a three-dimensional model in response to user manipulation of a pointer-positioning device [col. 3 lines 19-22]. Referring to Fig. 1, the pointer-positioning device (104) can be a touch screen [col. 3 lines 54-60]. The rotation routine enables the computer system (100) to rotate a three-dimensional model in response to a user "grabbing" a reference point on the chart with the input device (104), and then "dragging" that reference point to a new location [col. 4 lines 7-11]. In the example provided by Lines, to rotate the chart (200) displayed on the display device (103), the user first positions the pointer (210) over the reference point (201) and then depresses a predefined mouse button. While depressing the predefined mouse button, the user repositions the pointer (210), effectively dragging the reference point (201). The computer system (100) rotates the chart (200) to match the movement of the pointer (210). When the user releases the predefined mouse button, a signal is sent to the rotation routine that the user desires to cease rotation of the chart (200) [col. 4 lines 7-60]. Although Lines uses the example of a mouse pointer with buttons, Lines does teach the use of a touch screen. It would have been obvious to one of ordinary skill in the art to use the user's finger (said ***physical touch***) as the input device to manipulate the pointer (210) to rotate the chart (200). Therefore, as the user touches the touch screen, it acts as depressing the mouse button. As the user drags his/her finger (i.e. pointer (210)) while keeping interaction with point (201), computer system (100)

rotates chart (200) to match the movement of pointer (210), i.e. user's finger. Furthermore, as with the mouse, when the user takes his/her finger off of the touch screen (i.e. releases mouse button), a signal is sent to the rotation routine that the user desires to cease rotation of the chart.

It would have been obvious to one of ordinary skill in the art to implement the halting of rotation when the user's physical touch has been removed as taught by Lines in the method/system of Ono since the kinesthetic correspondence between the movement of the pointer positioning device (i.e. user's touch) and the direction of the model's movement provides the sense of actually rotating the displayed model [Lines: col. 1 lines 31-36].

In regards to claim **6**, Ono et al teaches ***a three-dimensional object manipulating apparatus, comprising:***

- ***a display means for displaying a three-dimensional object on the screen of a display unit;***

  [Fig. 1 (6, 9); col. 2, line 33 – col. 3, line 27]

- ***a coordinate detecting means for detecting a coordinate defined on the display screen by a user's touch;***

  Ono teaches [Fig. 1 (5, 6, 7); positional information indicated by user via a pen (7) on a display screen (6) of the tablet (5), is input to the image generating section (2); col. 2, line 33 – col. 3, lines 27; col. 3, lines 45-64].

Referring to Fig. 1 of Lines, the pointer-positioning device (104) can be a touch screen [col. 3 lines 54-60]. The rotation routine enables the computer system (100) to rotate a three-dimensional model in response to a user "grabbing" a reference point on the chart with the input device (104), and then "dragging" that reference point to a new location [col. 4 lines 7-11].

Therefore, it would have been obvious to one of ordinary skill in the art to implement the touch screen of Lines and use the user's own finger as the input device instead of the tablet (5) and pen (7) of Ono in order the free the user from having additional input devices, such as a mouse or stylus.

- ***a determination means for determining a moving direction for the three-dimensional object in a predetermined cycle on the basis of the coordinate detected by the coordinate detecting means and barycentric coordinate of the three-dimensional object on the display screen; and***

[Fig. 1b (18); axial rotation angle calculation circuit (18) performs calculations to determine the three degrees of freedom to be used for controlling the posture of object in three-dimensional space; col. 3, lines 1-5]

The data is inputted by the user for the rotational operation via input device shown in Fig. 1 (5, 6, 7). As shown in Figs 4a-4d, the polar coordinates are specified by moving a point P (***coordinate detected by the coordinate detecting means***) on the spherical surface (22) from P0 to P1 to rotate the object (21). The rotation about an axis is defined by the center O of spherical surface (22) and the point P0 or P1 [col. 3, lines 45-65].

As shown in Fig. 4c, a rotation angle α about the axis (O-P1) is determined via points P2 and P3. Additionally, the user moves the pen (7) from the start point P2 in the direction of the desired rotation and then specifies another point P3 on the spherical surface (22), so that the angle $P_2P_1P_3$ defines a rotation angle about the axis OP1 [col. 3, lines 45-65; col. 5, lines 30-47]. The direction of rotation corresponds to said ***moving direction for the three-dimension object.***

- ***an object moving means for moving the three-dimensional object on the basis of the result of determination supplied from the determination means;***

  [Fig. 1 (3); col. 2, line 33 – col. 3, line 27; where ***moving the three-dimensional object*** corresponds to rotating a object in three dimensions].

Ono implicitly teaches ***wherein the determination means further determines a rotating speed for the three-dimensional object on the basis of a distance between the coordinate detected by the coordinate detecting means and a central coordinate on the display screen, and the object rotating means rotates the three-dimensional object at the determined speed; and***

The user defines an axis of rotation as well as an angle of rotation. Applicant defines the angle of rotation as the speed of rotation [refer to [0091]]. As shown in Fig. 4c of Ono et al., a rotation angle α about the axis (O-P1) is determined via points P2 and P3. Additionally, the user moves the pen (7) from the start point P2 in the direction of the desired rotation and

then specifies another point P3 on the spherical surface (22), so that the angle $P_2P_1P_3$ defines a rotation angle about the axis OP1 [col. 3, lines 45-65; col. 5, lines 30-47]. Therefore, from the definition within the disclosure of the current application, Ono teaches the speed of rotation.

Lines teaches ***a three-dimensional object manipulating apparatus comprising:***

- ***wherein the three-dimensional object stops rotating when the coordinate detecting means no longer detects a coordinate defined on the display screen by a user's physical touch on the display screen.***

  Lines teaches a system/method for rotating the display of a three-dimensional model in response to user manipulation of a pointer-positioning device [col. 3 lines 19-22]. Referring to Fig. 1, the pointer-positioning device (104) can be a touch screen [col. 3 lines 54-60]. The rotation routine enables the computer system (100) to rotate a three-dimensional model in response to a user "grabbing" a reference point on the chart with the input device (104), and then "dragging" that reference point to a new location [col. 4 lines 7-11]. In the example provided by Lines, to rotate the chart (200) displayed on the display device (103), the user first positions the pointer (210) over the reference point (201) and then depresses a predefined mouse button. While depressing the predefined mouse button, the user repositions the pointer (210), effectively dragging the reference point (201). The computer system (100) rotates the chart (200) to match the movement of the pointer (210). When the user releases the predefined mouse button, a signal is sent to the

rotation routine that the user desires to cease rotation of the chart (200) [col. 4 lines 7-60]. Although Lines uses the example of a mouse pointer with buttons, Lines does teach the use of a touch screen. It would have been obvious to one of ordinary skill in the art to use the user's finger (said ***physical touch***) as the input device to manipulate the pointer (210) to rotate the chart (200). Therefore, as the user touches the touch screen, it acts as depressing the mouse button. As the user drags his/her finger (i.e. pointer (210)) while keeping interaction with point (201), computer system (100) rotates chart (200) to match the movement of pointer (210), i.e. user's finger. Furthermore, as with the mouse, when the user takes his/her finger off of the touch screen (i.e. releases mouse button), a signal is sent to the rotation routine that the user desires to cease rotation of the chart.

It would have been obvious to one of ordinary skill in the art to implement the halting of rotation when the user's physical touch has been removed as taught by Lines in the method/system of Ono since the kinesthetic correspondence between the movement of the pointer positioning device (i.e. user's touch) and the direction of the model's movement provides the sense of actually rotating the displayed model [Lines: col. 1 lines 31-36].

In regards to claim **9**, claim 9 recites similar limitations as claim 1 and thus, is rejected with the same basis and rationale as claim 1. Furthermore, it would have been obvious

to one of ordinary skill to interchange a mouse and pointer system with a touch screen as another means of defining the points on the display.

In regards to claim **12**, claim 12 recites similar limitations as claims 9 and 4 and thus, is rejected with the same basis and rationale as claims 9 and 4.

In regards to claim **14**, claim 14 recites similar limitations as claim 6 and thus, is rejected with the same basis and rationale as claim 6.

In regards to claim **17**, claim 17 recites similar limitations as claim 1 and thus, is rejected with the same basis and rationale as claim 1. Furthermore, referring to Fig. 1b, it would have been obvious for instructions to reside in the memory device (12) in order to implement the method of Ono.

In regards to claim **18**, claim 18 recites similar limitations as claim 6 and thus, is rejected with the same basis and rationale as claim 6. Furthermore, referring to Fig. 1b, it would have been obvious for instructions to reside in the memory device (12) in order to implement the method of Ono.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sciammarella et al. (6,052,110)

Allard et al. (5,615,384)

Serra et al. (2004/0246269 A1)

Chen (5,019,809)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle K. Lay whose telephone number is (571) 272-7661. The examiner can normally be reached on Monday-Friday 7:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee M. Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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